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Technology for teaching students to solve practice-oriented optimization problems in mathematics

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Abstract

© 2018 by the authors. The transition to new educational standards puts forward the applied orientation of training school education. The universality of mathematical methods allows to reflect the connection of theoretical material of various fields of knowledge with practice on the level of general scientific methodology. Practice-oriented activity, as a manifestation of the content of the mathematics course of the secondary school, determines the importance of mathematics in preparing students for continuing education in the process of professional development. But at the same time there arises the need to stop understanding the educational activity only as a process of obtaining ready-made knowledge. The relevance of the problem is caused by the insufficiently developed method of teaching to solve practice-oriented optimization problems in the school course of mathematics as a means of strengthening its applied orientation. The purpose of the article is to develop and substantiate the technology of teaching students to solve practice-oriented optimization problems in the course of implementing the applied orientation of the mathematics course. The article discusses methodological aspects of organizing pupils' training in mathematics, substantiates the need to use practice-oriented optimization problems in mathematics in secondary schools, suggests a set of tasks and considers various methods for solving practice-oriented optimization problems, and also reveals the specificity of solving problems of this type.

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Keywords

Applied orientation of training, Mathematical education, Optimization problem, Practice-oriented training, Teaching methods

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